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THE PROGRAM FOR BRAIN INJURED CHILDREN IN THE NEW YORK CITY PUBLIC SCHOOLS, AN APPRAISAL.

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IN 1959, THE TWO EXISTING SPECIAL CLASSES FOR BRAIN INJURED CHILDREN IN NEW YORK CITY WERE EVALUATED BY OBSERVATIONS, EXAMINATION OF THE STUDENTS' MEDICAL AND EDUCATIONAL RECORDS, AND INTERVIEWS WITH TEACHERS, PSYCHOLOGISTS, PSYCHIATRISTS, AND SPEECH AND OTHER SPECIALISTS. RECOMMENDATIONS WERE MADE IN AN INTERIM REPORT. A LONGITUDINAL STUDY WAS PLANNED TO DETERMINE WHETHER THE NEW PROGRAM FOR CHILDREN WITH MINIMAL BRAIN DAMAGE AND WITH AT LEAST POTENTIALLY NORMAL INTELLIGENCE WAS MEETING THE CHILDREN'S NEEDS. THE PRESENT REPORT IS BASED UPON TWO GROUPS OF SUBJECTS--SIX STUDENTS WHO HAD BEEN IN THE PILOT CLASS IN 1958 OR EARLIER AND 19 OF THE 32 CHILDREN WHO WERE IN CLASSES FOR BRAIN INJURED CHILDREN IN APRIL 1960 AND FOR WHOM FOLLOWUP DATA COULD BE OBTAINED. CLASSES WERE OBSERVED, TEACHERS AND PRINCIPALS WERE INTERVIEWED, THE RECORDS OF THE SUBJECTS WERE EXAMINED, SUBJECTS WERE ADMINISTERED STANDARDIZED TESTS OF READING AND MATHEMATICS, AND TWO SCALES MEASURING CHARACTERISTICS AND BEHAVIOR WERE OBTAINED FOR THE 19 SUBJECTS. RESULTS OF THE TESTS INDICATED THAT AVERAGE GAIN OVER THE PERIOD OF 2 1/2 YEARS WAS 1.0 YEARS IN READING AND 1.3 YEARS IN MATHEMATICS. THE AVERAGE IQ WAS SLIGHTLY ABOVE 75. IMPROVEMENT IN TEST TAKING BEHAVIOR AND IN NEGATIVE CHARACTERISTICS OCCURRED FOR THE GROUP AS A WHOLE. THE GROUP OF SIX SUBJECTS FROM THE PILOT CLASS WERE PRESENTLY ENROLLED IN SIX DIFFERENT SCHOOLS--THREE WERE IN MENTALLY RETARDED CLASSES, TWO WERE IN REGULAR CLASSES, AND ONE WAS IN A HEALTH CONSERVATION CLASS. ACHIEVEMENT TESTS IN READING AND MATHEMATICS SHOWED AN AVERAGE GAIN OF ABOUT 2 YEARS ON THE TESTS OVER THE FOLLOWUP PERIOD OF ABOUT 3 1/2 YEARS. BASED ON THE OBSERVATIONS AND INTERVIEWS, RECOMMENDATIONS WERE MADE CONCERNING (1) MEDICAL, PSYCHOLOGICAL, AND EDUCATIVE EVALUATION, (2) SELECTION AND TRAINING OF TEACHERS, (3) SUPERVISION, (4) PROVISION OF AUXILIARY SERVICES, (5) CURRICULUM DEVELOPMENT, (6) PARENT EDUCATION, (7) INTERCOMMUNICATION AMONG AGENCIES, AND (8) WIDENING THE PROGRAM. A POSTSCRIPT DISCUSSES TRENDS AS OF SEPTEMBER 1964. (JA)

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PREFACE

As one of its major functions, the Bureau of Educational Research carries on extensive appraisals and surveys of one or another of the many facets of the educational program of the New York City schools. Continuous study of school practices and of the abilities and characteristics of children is important; through such information the schools can plan the kind of educational program that best meets the needs of their children.

The program for brain injured children that is evaluated in this report was carried on under my supervision by Miss Sue Moskowitz, Assistant in Research, in cooperation with the Bureau for the Education of the Physically Handicapped. This bureau administers and supervises the special classes for the brain injured in addition to long-established programs for children with various physical limitations, both in special classes and on home instruction.

Special education for children with minimal brain damage began with one class in 1955. The second class was opened in 1958; at the time the final data in the study were gathered, there were forty-five classes and a long waiting list.

The data reported here could not have been gathered without the help of the director, Mr. Marcus Arnold, and his supervisory staff: Mrs. Grace McCandless (now an Assistant Director), Miss Margaret A. Harvey (now an Assistant Administrative Director), Mrs. Mary Mullally, and Miss Loretto Donnelly. Warm appreciation is due them as well as all the principals and teachers who participated in the study. They exextended a friendly welcome and generously assisted the researcher in every way.

Appreciation is also extended to those who reviewed the preliminary draft of the report and its recommendations: Mr. Richard Lubell, Acting Associate Superintendent, Division of Child Welfare; Dr. Samuel D. McClelland, Acting Director, Bureau of Educational Research; Mr. Arnold; and Mrs. McCandless.

J. Wayne Wrightstone
Acting Associate Superintendent

I. INTRODUCTION

A. THE SETTING FOR THE RESEARCH

1. Origin of the Study of the Program for Brain Injured Children

Near the end of the school year of 1958 the Assistant Superintendent in charge of the Division of Child Welfare requested that the Bureau of Educational Research conduct an evaluation of the program for brain injured children. The experimental pilot class that was in operation at P.S. 85 Bronx was then approaching the end of its third year of operation, and the opening of an additional class was being considered.

The Assistant Superintendent felt that a long-term longitudinal evaluation of the program in terms of realization of its objectives was in order, since there was pressure for its expansion and a long waiting list. Accordingly, the Director of the Bureau of Educational Research assigned the present writer, an Assistant in Research, to evaluate the new kind of classes.

2. History of the Program

The first class for brain injured children was begun in 1955 at P.S. 85 Bronx with one teacher, with a part-time coordinator who maintained liaison between Board of Education and hospital personnel, and with Dr. Sidney Carter of Neurological Institute as Medical Director. Initial referrals of children were made to the Acting Director of the Bureau for the Education of Physically Handicapped Children and then to Dr. Carter and the Bureau of Child Guidance for medical and psychological evaluation. If these evaluations recommended the child's admission, he was placed in the class for a trial period.

The class was intended for the "brain injured" child with "minimal brain damage." It was limited to children without serious neurological involvement (such as cerebral palsy) or marked mental retardation. He might have need of training in one or more areas of perception: visual-motor, auditory-language, kinesthetic, tactile. He would, very likely, have more or less severe disturbances in emotional-social development which might be evidenced by such behavior as hyperactivity, distractibility, irritability, impulsivity.

No bus service was provided for the children. Parents were responsible for the transportation of their children to and from the school building.

In accordance with the plan to limit the size of the class, five children were admitted to this new type of class; but before the first day was over, it was obvious that an evaluation of the child's manageability and educability should have been a feature of the screening process, and that admissions to the class would have to be staggered. On the first day the little class of five children "raised ructions that had repercussions throughout the school." Accordingly, two of the children were retained, and others were added gradually throughout the ensuing six months or so until the register was six.

The teacher was given freedom in selecting her curriculum and apparently maintained a fairly close relationship with Neurological Institute.

B. THE PILOT STUDY (1958-1959)

The problem explored in the Pilot Study can be stated simply and clearly in the words of the Assistant Superintendent who requested it: Does this expensive new type of special class do what we hope it will do? Is it good enough for us to retain and expand the program?

The first study was conducted during the year 1958-1959, the second year of the new program. Since it was concerned with (1) the pilot class* whose teacher had just left and had been replaced with a teacher with no previous teaching experience and (2) a newly-opened class in Brooklyn whose pupils were added gradually as the months went by, it was decided not to try to introduce objective measures into the evaluation during that year. The study for that year was to be based on observations, interviews, and examination of the children's medical and educational records, and was to create instruments that could be used to develop data during the following years.

An attempt to introduce one objective measure - time samples of pupil behavior-soon proved a failure. In this approach, each child was observed for two separate five-minute periods at each visit, and a running record was kept of his behavior, activities, and contacts. Since the researcher was assigned to other projects and could visit the classes rather infrequently, such an approach tended to reflect atypical behavior and to overlook either improvement or lack of improvement in an individual. A child who had several serious and destructive tantrums each week might show up as well-controlled if time-samples were taken during a morning when he was well-controlled, and vice versa.

A search of the literature by the researcher revealed that, thus far, little was available that might be useful to a single researcher in the evaluation of the entire program. Most of the research on, and education of, brain injured children had been concerned with gross neurological involvements such as those of mentally deficient or cerebral-palsied children. Aside from articles on findings about very specific and narrow aspects of perception, for instance, or reports on the effects of brain injury on adults through accidents or war injuries, or theorizing as to the actual effect and causes of slight neurological impairments (other than known injuries), the literature on brain damage was rather sparse. The concept of minimal brain damage as the probable cause of certain behavior syndromes was not yet as popular as it is now, a few years later.

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*During the year three children were discharged to other types of classes, and new entrants enrolled in this class.

Especially influential on the thinking of the time was the book Psychopathology and Education of the Brain-Injured Child* by Strauss and Lehtinen, who discussed brain injury in children and described specific approaches in teaching arithmetic, reading, and writing. The following is the definition they used in their book:

> A brain-injured child is a child who before, during, or after birth has received an injury to or suffered an infection of the brain. As a result of such organic impairment, defects of the neuromotor system may be present or absent; however, such a child may show disturbances in perception, thinking, and emotional behavior, either separately or in combination. These disturbances can be demonstrated by specific tests. These disturbances prevent or impede a normal learning process. Special educational methods have been devised to remedy these specific handicaps.

At the time of the onset of the study, this definition was substantially the same as that used by most writers, and also in this study. It should be emphasized, however, that the children in the present study were pupils without severe motor involvement whose intelligence was measured as normal or potentially normal.

C. RECOMMENDATIONS MADE AS A RESULT OF THE PILOT STUDY

At the end of the 1958-59 year, an interim report was submitted to the Division of Child Welfare by this writer on the results of (1) observations of the two existing classes; (2) examination of each child's medical and educational records; and (3) interviews at the Bureau of Child Guidance, Neurological Institute, and Brooklyn Jewish Hospital with teachers, supervisors, psychologists, psychiatrists, speech and other specialists.

Since the findings are too numerous to summarize here, only some of the recommendations based on the findings accumulated during the year will be given here. In substance, the following recommendations were made:

1. Coordinator or Consultant

A single special coordinator or consultant should assume responsibility for all phases of the program, particularly for consulting with teachers on curriculum and methodology, orientation of parents, and coordination with hospitals.

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*Alfred A. Strauss and Laura E. Lehtinen, Psychopathology and Education of the Brain Injured Child. New York: Grune and Stratton, 1951, p. 4

2. Screening of Entrants

   A screening team including neurologist or psychiatrist, supervisor, teacher, and psychologist should select the pupils for the class and assist in determining when the child would be ready for discharge and what kind of placement would be most favorable.

3. Neurological and Psychological Evaluation

   A detailed evaluation of the entrant should be supplied to the teacher before entry to the class; periodic reevaluations of each child at intervals of a year should be obtained.

4. Selection of the Teachers

   There should be careful selection of experienced teachers together with on-the-job training.

5. Instructional and Curriculum Approach

   A marked contrast in instructional approach and program between the two classes was noted, particularly in the amount of structuring. It was urged that the type of approach to be used be carefully considered.

6. Record Keeping and Planning

   Instructional planning should be detailed and continuous. Careful and continuous records of children's progress should be kept; e.g., anecdotal records, samples of the child's work.

The twenty-four page Interim Report was submitted to the Assistant Superintendent who had requested it. After discussion he requested that the study be continued for a period long enough to allow objective evidence to be gathered. Several new classes were to be opened during the course of the year 1959-60. It was planned that, allowing for a considerable number of months for finding teachers and classrooms, preparing the rooms, and very gradually adding children to each new class, the initial objective tests could be given in the spring of 1960. Thus, except for a few visits and brief informal observations to become acquainted with the new teachers and situations, a start on the longitudinal phase of the study was delayed until the spring of 1960 when the classes had been opened and the registers were presumably complete. It should be pointed out that for children who had been in the classes for some time, the initial test scores also reflect some training already given in the Special Classes, while for others the test scores reflect achievement virtually on entrance into the Special Classes.

During this year, however, the instruments tentatively developed during the Pilot Study were reappraised and refined. In view of the complexity and highly individual nature of each child's limitations, and the inexperience of nearly all the teachers in teaching these classes for neurologically impaired children, the scale for teacher appraisal of pupils' physical-personal-social characteristics was greatly simplified.

D. THE LONGITUDINAL STUDY: 1960-1962

1. The Problem

The Longitudinal Study had as its broad aim the same one as that of the Pilot Study; i.e., to determine whether the new program for children with minimal brain damage and with at least potentially normal intelligence was meeting the needs of the children.

The program was investigated through two approaches: (1) a long-term continuing study of the classes and children who were in the program as of the school year 1959-1960; (2) a follow-up of the children who had been in the original Pilot Class after their transfer out of the Special Class to another school placement.

2. The Subproblems

The major subproblems to be explored were:

a. What changes occurred in the academic achievement of the pupils as measured by objective tests and as seen by their teachers?

b. What were the general characteristics of the program?

c. What changes occurred in the personal, social, and physical development of the pupils as seen by their teachers and by the researchers?

d. What problems were met by the teachers and how did they meet them?

e. What were the reactions of the supervisors to the program?

3. The Study Population

a. The Pilot Study population consisted of the six children who had been in the Pilot Class in May 1958 or earlier, and had been in the class for a period of from one to three years. These children, one by one, were judged ready for transfer to various other schools - to regular, Health Conservation, or CRMD classes - and were followed up in those schools. At the close of the school year 1958-59 they had been given achievement tests in reading and mathematics. In 1962, all six - then in six different schools - were retested and were observed in their new classes.

b. The Longitudinal Study population consisted of the children who, as of April 1960, were in classes that were in operation in five different schools at that time, and that had been started before or in the fall of 1960. The group consisted of 32 children in classes enrolling an average of slightly fewer than six children. Within the two and a half years of the Longitudinal Study, there were numerous transfers of these children. While a few went to similar Special Classes in other schools, a number went to other placement in the city's schools - CRMD, regular, or Health Conservation classes. Those transferred were followed up in their new schools. Thirteen were lost to the study because of transfer to special private schools outside of New York or to distant public schools (Pennsylvania, California). By the time of the third testing period in 1962, nineteen children remained for whom complete data could be obtained. They were scattered among ten schools in four boroughs of the city.

4. Procedures Used in the Longitudinal Study

The following approaches were used:

a. Standardized tests of reading and mathematics

These were administered three times at approximately one-year intervals. The tests were selected according to each child's individual need and administered individually. Copious notes on the behavior of each child in the test situation were made.

b. Two scales measuring each pupil's characteristics and behavior

These scales were constructed by this researcher on the basis of observations of the classes, interviews with teachers, and a survey of available literature on the characteristics of brain-damaged children. The Adjustment Rating Scale was completed by the teachers both at the beginning and end of the Longitudinal Study. The Test Behavior Scale was completed by the researcher for each pupil after every test in order to assess behavior under the stress of a testing situation. In addition, the observer recorded a description of each child's behavior at that session.

c. Observations of the classes

These were necessarily irregularly spaced because of the simultaneous involvement of the researcher in a number of other research projects and the great distance of the experimental schools from one another and from the Board of Education. Each class was observed approximately five times during the Longitudinal Study and a running account was recorded at each observation. These observations furnished an impression of the program and facilities and of instructional approaches used by the different teachers.

d. Interviews with the teachers

Interviews with the teachers on the progress of the children, her records, her problems, and any other material introduced by the teachers were held, whenever possible, at each visit. The researcher was especially impressed by the teachers' warmth, feelings of involvement and concern, and eagerness to talk about their work.

e. Interviews with the principals

Usually, it was also possible to interview the school principal, who seemed glad to grant a brief interview and spoke freely about the advantages and problems arising from the classes.

From the material accumulated in the interviews the researcher was able to build the Teacher Questionnaire and the Supervisor Questionnaire that formed the basis for the final interviews reported here.

f. Semi-structured interviews with teachers and principals

These interviews, conducted at the end of the study, yielded the major part of the material reported in the chapters on interviews in this report.

g. Examination of the cumulative records of the children in both the pilot and longitudinal studies.

II. THE CLASSROOM PROGRAM AS OBSERVED BY THE RESEARCHER

A series of observations in the classrooms throughout the study yielded a variety of impressions and insights into the program. It had been planned that each class would be observed by the researcher at least three times a year. A running account of what transpired was recorded at each observation.

Because of transfers of children within or out of the Special Classes, the plan proved not completely feasible. The Longitudinal Study was concerned with the seven classes (in five different schools) fully enrolled at the onset of the data collection. As new classes were opened in the same schools and the original classes were split (or transferred to other schools) some of them could not be observed as often as others.

In addition to the classes included in the study, new classes opened in the schools being visited or in other schools were also observed at least once, in order to arrive at a broader picture.

1. Composition of the Classes

In general, each class was opened with two children, and the register was very gradually increased to six. In the earliest classes the age range was wide - as much as five years - but as an additional class was opened in the same school, the age range could be narrowed in each pair of classes. This was particularly so in one school, which had four classes. Another had four classes for a limited period; these proved to be too many for the school, and two were transferred.

Since the majority of New York City schools are fully utilized, some difficulty arose in finding classrooms. All except one school in the study were situated in outlying areas far from the center of the city.

2. Admission and Discharge

Briefly, the classes sought to serve children in whom perceptual and other learning difficulties stemmed from neurological rather than emotional sources. Children were to be selected in whom associated emotional disturbance, when present, would be secondary, and neurological limitation primary. The criteria excluded children with severe orthopedic or sensory handicaps such as profound deafness. At least a small amount of ability to adapt to a small-group situation was a criterion; and finally, a normal or potentially normal I.Q.

In the opinion of the teachers not all the children accepted appeared to be primarily brain injured. A few were characterized by their teachers as schizoid. At least one was so withdrawn that several successive teachers felt that he could not be reached in this class. Some of the children were regarded by teachers as better suited to C.R.M.D. classes and one seemed severely autistic.

The researcher, after observing these children over an extended period, was inclined to agree with some of these teachers. Parent pressure, perhaps on the recommending treatment agency, may have been responsible for the placement of borderline cases. The difficulty of classifying children as "brain injured" or "emotionally disturbed" is frequently commented on in the literature. In fact, when the researcher examined the cumulative reports of medical and psychological tests by treatment agencies for each child in the study, she found that a number of the children were recommended for placement with a tentative diagnosis of "probably brain injured," indicating that a differential diagnosis between brain damage and emotional disturbance was often extremely difficult.

On the other hand, the researcher observed some children in the classes with few or no overt behavior difficulties, though plenty of learning difficulties. These children had apparently been recommended for the Special Classes because of the latter circumstance. It is possible that these children were adversely affected by the bizarre behavior of some of the others.

3. Screening of Cases

Except in the case of the Pilot Class, no central screening source existed for the classes for some time.. Admission was usually based on a positive or probable medical diagnosis of brain injury after recommendation by any one of a number of sources, including a private physician, a school principal, or a treatment agency. The final decision was centered in a Department of Health neurologist on the basis of diagnoses by treatment agencies.

During the course of the study, a screening unit was set up for the classes in the borough of Manhattan in cooperation with the Department of Health. On the day that the researcher observed this panel in action, it included a neurologist, a psychiatrist, a psychologist (from the Bureau of Child Guidance), a social worker, the principal of the school, and the borough supervisor of the Bureau for the Education of Physically Handicapped Children. The candidates for the classes had previously been examined by the medical panelists and by the psychologist; the parents had been interviewed by the social worker; and the children had been observed and reported on by a teacher of a Special Class in her own classroom. Each case was thoroughly reviewed by the panel, which came to a decision as to whether the child should be admitted.

It can hardly be wondered at that the teachers of the various classes in Manhattan felt that, with the establishment of this screening unit, more "suitable" cases were being selected than was previously the case.

4. Supervision

The classes were supervised jointly by the various borough supervisors of the Bureau for the Education of Physically Handicapped Children and the principal (or an Assistant Principal) of each school. The borough supervisors, of course, had a large number of other types of special class - Health Conservation, Cerebral Palsy - to deal with. While the policies established for the classes for the brain injured were largely the same, there were actually some differences in rate of opening new classes, screening, teacher selection, and the like. The chapter on the interviews with the principals discusses many of the problems observed by the researcher during visits to the classes.

5. Physical Facilities

Classes were necessarily located in schools that had vacant rooms, and it was apparent that an effort had been made to find optimum surroundings. The rooms were large; the classes were usually located in quiet parts of the buildings and grouped in close proximity.

The large size of most of the rooms permitted flexible arrangements, so that cots for rest and individual screens to separate the children from one another and lessen distraction during work periods could be features of the program. Movable desks and chairs served this flexibility. Not all the teachers used the screens. Not all used cots for rest periods. Teachers of the older children, in particular, introduced quiet games instead.

From the beginning, efforts were made by the teachers and supervisors to find - or make - suitable materials. These became increasingly varied as time went on, and it was apparent that teachers were cooperating both in the workshops sponsored by the Bureau and informally among themselves, or with the aid of the borough supervisors (who often personally brought materials to their schools). Among the materials were books, manipulative materials for developing academic or self-help skills, puzzles, easels, paints, blocks, and toys. Some of the teachers were unusually creative in making materials - particularly in mathematics - for certain children.

6. Some Features of the Classroom Programs

The school day in these classes is four and a half hours plus a half-hour lunch period. To these must be added the sometimes not inconsiderable bus rides to and from school.

The classroom curricula included most of the same general types of activities as those conducted in regular classes. The methodology, however, particularly of the best teachers, aimed at intensive individualization of instruction and adaptation to the specific needs of each child. It was obvious that there was a marked variation in the ability of the teachers to determine specific needs (other than approximate estimates of retardation in reading or mathematics or writing) and to choose the specific approaches that would lead to learning.

There appears to be general agreement among authorities that careful structuring of learning activities is a basic tenet for teaching brain-injured children. The majority of the teachers were not only aware of this principle but also strove to implement it, some with impressive resourcefulness and ingenuity.

In addition to individual instruction, each teacher carried on group activities. The researcher observed one lesson that developed both scientific attitudes and concepts, in which a small snake was discussed, carefully handled, and even lovingly stroked by the teacher and her young children who were too absorbed to notice the presence of a stranger.

Some teachers were especially skillful in motivating the children to work independently and to improve their work. Often it was obvious that extrinsic motivation in the form of a star or the remission of homework was needed more often than it is in regular classes. Praise and continuous encouragement were also used more often, particularly as a large proportion of the children were immature for their age.

For a number of children, a good deal of training was given in some classes in self-help: buttoning buttons, tying bows, handling scissors, putting on coats and sweaters, overcoming directional confusion.

There were wide differences among the classes observed as to nonacademic activities. Some teachers were able to use art, music, and games as enjoyable and integral parts of a worthwhile educational program; in other classes these were extraneous.

In some of the best programs even the lunch period was carefully planned and utilized as an integral part of the educational program. The teacher and children gathered round a table; good eating habits, nutrition, and table manners were discussed in a pleasant way; the teacher skillfully managed a pleasant conversation.

7. Classroom Atmosphere

Another basic principle of the education of neurologically impaired children has been the reduction of distracting influences in the classroom. Indeed, some writers and educators have insisted on virtually bare rooms.

None of the teachers resorted to such an extreme. On the other hand, there were marked differences in the classrooms of the various teachers. Some of them displayed only small amounts of blocks or books or children's work, and the like, except when they were actually in use. The rest of their materials were kept in closets or screened in shelves, and were brought out when needed. On the other hand, in one or two rooms there were a space-consuming and, even to the researcher, bewildering and distracting number of materials on shelves, on bulletin boards, on walls.

Probably even more important was the skill in avoiding distracting influences and strain evinced by the majority of the teachers. A number were admirable and unusual in their ability to teach an individual with a minimum of distraction to others. With the children in this study this was no small achievement; they tended to be attention-seeking and to find it hard to inhibit impulses to annoy their classmates. As time went on, and their children recognized and understood the limits on behavior, these teachers were able to increase the freedom of action of the children in their rooms. Less expert teachers seemed not able to attain this; in a few rooms there was some loud scolding and less ability on the part of the children to work independently. Needless to say, the children in the latter rooms seemed less content and less able to work with concentration, though no child seemed really to dislike school.

A particular difficulty in these classes was the occurrence of explosive emotional outbursts by certain children, particularly when new to the class. One boy suddenly, on very slight provocation from another child, screamed frantically for several minutes, knocked over a portable blackboard, swept everything off the teacher's desk, kicked a wastebasket into the center of the room, and threw nearby objects about.

8. Planning

Most of the teachers maintained weekly or biweekly plan books which were usually required and checked by the school principal. This is discussed in the chapter on interviews with the teachers.

9. The Teachers

On the average, the caliber of the teachers seemed high. The enthusiasm and interest of most of them were also evident.

The researcher is convinced that, even more than for a regular class, the ability and personality of the teacher are crucial in the progress of handicapped children. Nonhandicapped children generally have many fewer learning difficulties. They learn to some extent even with a completely inexperienced teacher; they learn from each other and outside of school. In the course of a school career, they change teachers every year.

But the children in these Special Classes had histories of distinct school failure before entering the classes. They had demonstrated inability to learn naturally. Furthermore, they were to stay with the same teacher for a period of years. The importance of exceptionally good teachers for these children can therefore not be overemphasized.

It was obvious that even though the average of the teachers observed was high, a few of the twenty-five or thirty observed during the years of the study did not seem fitted for this type of Special Class. They did not show the command of teaching techniques, flexibility, energy, warmth, objectivity, experimental spirit, or involvement required to meet the needs of children who make such incessant demands on the teacher's resourcefulness and patience. It is interesting that these less adequate teachers seemed rather complacent about their performance and expressed no qualms about their programs. Most of the teachers observed, on the other hand, evinced deep concern about the pupils, could be objective about them, and seemed to seek constantly for new instructional approaches and materials.

While many factors - e.g., screening, materials, supervision, physical facilities - played a part in the progress of the child, it must be reiterated that the role played by the teacher is of paramount importance. In the interviews with principals it was obvious that they felt this. The researcher (who observed many of these special teachers over a long period of time in a variety of school situations) felt that the teachers for these Special Classes must be carefully selected and must have already had successful teaching experience in other kinds of classes. On the other hand one very good teacher had had no previous experience, but she had unusual training and ability as well as good supervision and the ready cooperation of an experienced fellow teacher.

10. Transfer to Another Class or School

For the most part, transfer of children deemed ready for a larger-group situation (Regular Class, Health Conservation Class or C.R.M.D. Class) took place after a tryout period for part of the day in another class in the same school. This might consist of joining a similar age group for an hour or more a day, to be followed by longer periods till the child attended the other class for a full day. Most transfers were made through joint consultation by supervisors of the Bureau and the school, and involved the teacher's recommendations.

After transfer to another type of class in another school, however, some of the children experienced a degree of setback - in a few cases a considerable one. This may well have happened because the new teacher or school either knew nothing of the child's history or misinterpreted it. In some cases the new teacher was not carefully selected in terms of experience or personality.

In most cases, the new teacher - and succeeding ones - were at a considerable distance from the transferee's former school and knew nothing of (or misunderstood) the child's neurological disadvantages. They understandably criticized a child's poor penmanship, or spelling, or hyperactivity that actually represented a great improvement over the way in which he had originally performed.

11. Opportunities for Children to Socialize

A number of teachers, throughout the study, referred to lack of friends outside of school as a major problem for their children. They reported that parents were also concerned about this.

In the opinion of the researcher, the problem is one that is an integral part of all special education, partly because the child usually goes to a school at a distance from his neighborhood, and partly because of the child's own difficulty, whether it be physical (deafness, orthopedic limitation), or emotional, or mental retardation.

The problem in these classes was further exacerbated by the fact that the age-range was wider than that of regular classes. A number of teachers made an effort to help parents arrange for trips and out-of-class visitation between children in the classes. Two teachers tried a joint lunch period for some months, but dropped it as overstimulating.

Most teachers were successful in making opportunities for their pupils to join in school activities like assemblies and special shows (puppets, TV). The fact that Special Class children arrive at school later and leave earlier than the other classes, and eat lunch apart from them, precludes interaction even for those children stable enough to tolerate considerable stimulation and unstructured situations.

III. THE CHILDREN: ACHIEVEMENT TESTS

A. THE LONGITUDINAL GROUP

In an attempt to get objective evidence of growth in achievement, the researcher administered standardized tests of reading and mathematics. Yearly tests were given to the children in the Longitudinal Group study. These took place in (1) the spring of 1960; (2) the spring of 1961; (3) the late fall of 1962.* As might be expected, there was considerable attrition of the number of subjects during this time. Of the 32 children tested in 1960, 19 still remained in the study and were given the final tests in 1962. The other 13 had been placed in private boarding schools by their parents for one reason or another, or had moved to distant cities.

It was anticipated that objective testing would present serious difficulties. This proved to be the case. In the first place, all achievement tests had to be individually administered because of the children's behavioral difficulties and wide range of achievement. Individual testing is always time-consuming. In addition, the schools were very distant from one another. Since there was only one researcher, who was simultaneously involved in a number of other projects, testing of all children in a school during the three yearly testing programs had to be completed within a two-day visit to that school.

The behavior diffulties and low tolerance of frustration of the children were serious deterrents to reliable testing. Such typical qualities as distractibility, hyperactivity, anxiety, brief attention span, perseveration, catastrophic reaction, often led to erratic performance. In addition, a few children were receiving drugs of some kind.

Some children grew tired rapidly after working fairly well for part of the test. During the initial testing period, one girl, who was sent by her parents to a special private school the next year, came willingly enough with the examiner, and then refused, on two successive visits, to work on any items. One boy - diagnosed as possibly autistic - was unreachable the first year, but responded to some extent the second, and was very responsive for the final test; he obviously enjoyed the last experience, chatting with the examiner enthusiastically.

On the other hand there was no unwillingness to accompany the examiner. Nearly all the children were friendly and even pleased at being singled out to work alone with an adult. In most cases the friendly attitude was most pronounced in children whose teachers had established very good relationships with their pupils.

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*Because of illness, two children could not be tested till early February of 1963.

1. Procedure Used in Testing

As a rough guide to choosing suitable tests*, the examiner first asked the teacher for an estimate of the reading and mathematics levels of each child. The tests were administered individually in a quiet room. In the initial testing only a few children were able to proceed with any smoothness. Nearly all had to work aloud, item by item, as the examiner provided constant encouragement and prodding. For the reading tests most children read each selection and its questions aloud, and marked the responses with the examiner's help. Some children could work silently. The mathematics tests depended even more on oral procedures. Because of the nature of the children and the method of administration the test scores must be regarded as approximations.

2. Improvement in Children's Ability to Function under Stress

Since taking a test is a stressful, frustrating situation even for the ordinary child, it was felt that improvement in behavior during a test, from year to year, would be evidence of personality adjustment. A five-point Test Behavior Scale, based on commonly-assigned behavior characteristics of neurologically handicapped children, was devised. This scale was checked by the researcher immediately after each child was tested. The Test Behavior Scale used the following values: Good - 5; Fair - 4; Poor - 3; Very Poor - 2; Severe - 1. The categories are listed in Table A.

The table shows that the group as a whole, as seen by the researcher, improved in all aspects of test behavior. Most improvement was shown in "Distractibility", "Lack of Persistence", and "Nervousness". Since these were the poorest categories in the earliest test administration, the effects of the special class seem to be beneficial in these respects.

There was wide variation in behavior among the children. It was the impression of the researcher that improvement was greatest in the classes of the most able teachers.

The finding that behavior under the stress of a test situation was better in 1962 than in 1960 agrees with the reports of improvement by the teachers (Chapter IV). Both sets of data show particular improvement in "Distractibility", an important element in the learning situation.

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*The achievement tests used included the following: New York Tests of Growth in Reading, Test A (First Grade) and Test B (Second Grade); Metropolitan Achievement Tests of Reading (Primary, Elementary, Intermediate, Advanced); New York Reading Readiness Test; New York Inventory of Mathematical Concepts (Grades 1, 2, 3, 4).

The categories listed, of course, overlap somewhat, and were checked only in the reference to overt behavior.

Table A

Mean Ratings of Longitudinal Study Group
on Test Behavior Scale

Category	Mean Rating, 1960	Mean Rating,1962	Difference 1960-62
Distractibility	2.6	4.1	+1.5
Catastrophic reaction	4.1	4.4	+0.3
Perseveration	3.9	4.7	+0.8
Hyperactivity	2.8	4.0	+1.2
Anxiety - verbalized	3.2	4.4	+1.2
Lack of persistence	2.4	3.9	+1.5
Abnormal talkativeness	3.1	3.8	+0.7
Nervousness, tension	1.8	3.5	+1.7
Response to test directions	3.1	4.2	+1.1
Acceptance of examiner and of test situation	4.2	4.8	+0.6

There was certainly more anxiety than was verbalized - as is true of non-handicapped children as well; but some of the special-class children revealed anxiety with far less inhibition. One child kept asking, "Where do I live?" "What direction is my house?" "Do I live far away?" "Is my mother there?" Another asked "Was that right?" after every item in the mathematics test given the first year.

3. Achievement in Reading and Mathematics

The initial test administration (1960) showed that there was already a wide range of reading achievement (Table B). The initial scores in reading ranged from readiness to eighth grade,* but in mathematics the range was much narrower: readiness to second grade. Though at the time of the initial test the average age of the children was 9 years 6 months, and only one was under seven, four children were still on a reading readiness level and had made no appreciable start in mathematics.

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*The child who read at this level had come from a similar type of class in a private school. In mathematics he was at a first-to-second grade level.

By 1962, the youngest child was still on a readiness level in both subjects; this child was thought by her successive teachers to be too emotionally disturbed to learn. Four children had still made little measurable progress in mathematics.

The average gain in the reading test over two and a half years was 1.0 years and in mathematics, 1.3 years. For some children there was almost no gain; for others, average or better gain. It was apparent in classroom observations, however, that for some children the test scores were underestimating.

Table B

Standardized Test Results in Reading and Mathematics
for Longitudinal Study Group

	Reading (N=19)		Mathematics (N=19)	
Grade Score	Initial	Final	Initial	Final
Readiness	4	1	11	5
1 - 1.9	5	1	4	2
2 - 2.9	8	11	4	5
3 - 3.9	1	3		3
4 - 4.9		2		4
8 - 8.9	1			
10 -10.9		1		

It is obvious that, on the average, improvement in reading and mathematics was slow. Inspection of the I.Q.'s of the children, however, sets the improvement in a more favorable light. The average I.Q. of the group was slightly above 75 - little better than the upper range of 75 for C.R.M.DL.classes. These I.Q's were all the result of individual psychological tests. Sometimes a psychologist noted that the I.Q. obtained for a child was probably not a true reflection of his potential. This circumstance accounts for the fact that certain children in the C.R.M.D. range (50-75) had been placed in the classes. Minimal or not, the low I.Q.'s were good indications of certain children's capacity for academic learning, in view of perceptual or emotional handicaps.

It must be remembered that, especially for neurologically handicapped children, standardized tests may fail to measure all that they have learned. Tests for normal children stress ability to use what they know in a logical and functional way. They require children to interpret, generalize, and relate ideas. Neurologically handicapped children are typically said to be especially limited in these abilities. One of the chief indications on which diagnosis is based is impaired abstract and conceptual thinking. The teachers of the special classes often told the researchers that their pupils were far better in word recognition than in reading comprehension, and that they could read orally in a reader on a higher grade level than their test scores indicated, but had difficulty in getting all but literal meanings of what they read. Teachers of regular classes, on the other hand, often complain that test scores show a higher grade-level than the books their children can read. In both cases, standardized test scores are best regarded as approximations rather than absolute indications.

Similarly, the neurologically handicapped children could often do written computations that they were unable to apply in the functional and problem situations that constituted a large proportion of the test. The standardized test scores, therefore, do not accurately reflect the hard work of many of the teachers. They usually took this circumstance into account and, with a few exceptions, their estimates of probable test levels in skill subjects tended to be little higher than the test scores. The most capable teachers seemed to give the closest estimates.

B. THE PILOT CLASS GROUP

In addition to the nineteen children who remained to be followed to the end of the Longitudinal Study, the six children who had been in the original Pilot Class were also retested late in 1962 and were observed in their classroom setting in the six different schools to which they had meanwhile been transferred.

The six children of the original Pilot Class are not included in Tables A or B. These children were first tested in 1956, after the class had been in operation for three years, though only a few had been in the class for the entire three years. (The present study was requested at the end of the third year of the Pilot Class.) Since they were shortly transferred to other types of classes in other schools, they were not retested until the end of the study, when they were in six different schools. Three were in CRMD classes, two in regular classes (junior high school), and one in a Health Conservation class.

The average initial grade score for the group of six children was 1.9 in reading (range 0.0-5.6) and 1.6 in mathematics (range 0.0-4.0). Three and a half years later the averages were 3.9 in reading (range 1.3-9.0) and 3.5 in mathematics (range 0.0-8.0). Four children (three of whom were in CRMD classes) had made little or very slow progress since leaving the special class; two had made better-than-average progress. As would be expected, those who had made the best progress after leaving the Pilot Class were those who, according to the teacher, had made the best progress while in it.

C. DISCUSSION OF ACHIEVEMENT TEST SCORES

It is obvious that, in spite of the small classes and the incessant individualized labors of the teachers, about half the 25 children followed up to the end made slow academic progress. On the other hand, progress was made - an innovation in the academic achievement of a number of them. Most of the children had failed dismally to adjust to any kind of public school situation before entering these special "HC 30" classes. As has been pointed out, the average I.Q. of the Longitudinal Study group was only slightly above the upper limit specified for entrance into classes for mentally retarded children. It is probable that more intensive screening would permit the placement of neurologically handicapped children with the most potential for improvement in these special classes, while those who functioned like mentally retarded children could be enrolled in C.R.M.D. classes where special approaches could also be used.

No effort has been made, in reporting the achievement data, to evaluate the children's progress in terms of "expectancy". In view of their emotional and perceptual limitations, and the approximate nature of both the intelligence and achievement data, a standard of "expectancy" would be an idle vision.

IV. THE CHILDREN: CHANGES OTHER THAN IN ACADEMIC ACHIEVEMENT

Most of the pupils in the present study had had a history of school failure before entering the Special Classes. Though their academic achievement had been very poor in the previous private or public school classes, the written records strongly suggested that behavior difficulties rather than learning deficiencies had caused most concern.

It was therefore important to determine whether the years spent in the Special Classes had improved the children's ability to function in a classroom setting. The difficulty of accurately measuring their behavior has been commented on by various writers. It is obvious that the most effective way of measuring growth in these children would have been an intensive preliminary and final evaluation of each child by a diagnostic team like that later set up for Manhattan: a neurologist, a psychiatrist, a psychologist, a social worker, an educator, and a speech specialist. It was soon clear that such an evaluation would be impossible to obtain for this study. It was therefore obvious that teacher judgment must be appealed to for a measure of growth in pupil adjustment.

In order to increase objectivity and accuracy, a rating scale was developed. The items included were those most often mentioned both by teachers of the Special Classes and in the literature as typical of the behavior of children with neurological handicaps. Understandably, the scale was limited to certain aspects of overt classroom behavior that could be observed by the teachers with a fair measure of objectiveness.

1. The Adjustment Rating Scale

The Adjustment Rating Scale, a five-point rating scale, assigned values ranging from "5: Excellent" to "1: Extremely Severe." Wherever possible, the scale was rated by the teacher in the presence of the researcher. The brief descriptions of the items were designedly in simple terms and readily applied by teachers of widely varying experience.

The teachers showed little doubt or hesitation when marking the scale. They appeared confident and interested, and amplified their choices with many oral comments: "She travels to and from school alone now by public bus"; "He has no tantrums, but tightens up under pressure and goes into his own world"; "He's under sedation a terrific amount."

The characteristics rated were:

Hyperactivity - child finds it difficult to stay in his seat, constantly moves about, very restless

Poor Motor Control - poor at physical activities, in games or gym, bumps into furniture, often drops things

Table C

Negative Characteristics of Brain Injured Children
as Reported by Their Teachers (N=19)

INITIAL RATINGS (Spring 1960)

Characteristic	Rating (1: "Very Severe" to 5: "Excellent")					
	1	2	3	4	5	Mean
Hyperactivity	6	8	2	3		2.1
Poor Motor Control	1	2	6	3	7	3.7
Poor Social Behavior	4	7	5	3		2.4
Emotional Instability	6	5	5	3		2.3
Distractibility	6	8	4	1		2.
Talkativeness	2	2	8	6	1	3.1
Poor Attendance				16	3	4.2

FINAL RATINGS (FALL 1962)

Characteristic	Rating (1: "Very Severe" to 5: "Excellent")						
	1	2	3	4	5	Mean	Change
Hyperactivity	1	4	7	3	4	3.3	+1.2
Poor Motor Control	1	2	3	7	6	3.8	+0.1
Poor Social Behavior	2	2	6	6	3	3.2	+0.8
Emotional Instability	2	4	5	7	1	3.1	+0.8
Distractibility	2	6	6	1	4	2.9	+0.9
Talkativeness	4	2	2	4	7	3.4	+0.3
Poor Attendance				4	15	4.8	+0.6

Poor Social Behavior - is disliked by other children, dislikes most other children, has few friends, does not work or play with others

Emotional Instability - many tantrums and emotional outburst, yells or strikes at other children, easily discouraged by failure, very impulsive

Distractibility - exceedingly short attention span, attention easily deflected by very slight interruptions or extraneous distractions, rarely finishes a task, cannot work without almost constant supervision

Abnormal Talkativeness - talks aloud in class at random at any time, talks constantly to self while working, constantly claims teacher's or other pupils' attention

Attendance in School - child attends irregularly, misses bus, etc.

Table C summarizes the reports of the teachers on their pupils' behavior at the beginning and at the end of the experimental period. The qualities initially rated lowest were, as might be expected, "Hyperactivity" and "Distractibility." These qualities also showed the greatest amount of improvement quantitatively, though teachers indicated improvement in all the other items as well.

2. Statistical Significance of the Difference in Ratings

The "Sign Test" was chosen to establish the statistical significance of the differences between the initial and the final ratings of the children's

Table D

Significance of Difference of Changes in Negative Characteristics of Brain Injured Children as Reported by Their Teachers (N=19)

Characteristic	No. of Gains	No. of Losses	P
Hyperactivity	15	1	.001
Poor Motor Control	5	4	.032
Poor Social Behavior	13	3	.010
Emotional Instability	14	2	.001
Distractibility	12	2	.001
Abnormal Talkativeness	9	6	.084
Poor Attendance	12	1	.001

characteristics by their teachers. With the exception of the characteristic "Abnormal Talkativeness," the difference for each characteristic is significant at the five percent level (Table D). The difference for "Hyperactivity," "Poor Social Behavior," "Emotional Instability," "Distractibility," and "Attendance" are significant at the one percent level as well. It can thus be inferred that, with the possible exception of "Abnormal Talkativeness," the changes in overt behavior reported are probably real differences.

The improvement in various characteristics held to be typical of brain injured children that were reported by the teachers was also found by the researcher in the yearly testing situations. Ratings of overt behavior showed improvement for the group as a whole in responding to the stress of a test situation from year to year. This material is reported in the chapter on achievement tests.

A comparison of the judgments of pupils made by the teachers and the researcher (Chapter III) shows that both sources report substantial average gains.

V. THE INTERVIEWS WITH THE TEACHERS

A. INFORMAL INTERVIEWS

At every visit to a school, the researcher was able to obtain at least a brief nonstructured interview with each teacher. The material discussed was usually left to the teacher, who most often described the progress of the children, certain problems that were temporary or chronic, or their own attitudes toward various aspects of the program.

Many of the teachers seemed eager to talk about these topics to the researcher, and sometimes even thanked her after the interview. This was an interesting circumstance, since the latter took great care to offer no comments or solutions, and when necessary explained that she came in no supervisory capacity but simply to carry on a study. It was clear that the teachers took their work very seriously, and welcomed the chance to talk about it to someone who was familiar with it rather than in hope of an easy answer.

This conclusion is further borne out by the positive feelings the teachers expressed about meeting the other teachers of classes for the brain injured at conferences and workshops convened by their Bureau.

The researcher took notes at every interview, and used the materials accumulated to develop the structure of the final interviews.

B. THE FINAL INTERVIEWS WITH THE TEACHERS

Early in 1962 a partly structured interview was held in each of the "experimental" schools (59M, 226K, 201Q, 108X, 90X) with each teacher whose children were under study. Several other former and recent Special Class teachers of these children who were still in the schools were also interviewed. The total number of teachers interviewed was thirteen. The following elements formed the basis of the interview:

1. Information about the teacher herself: former experience; courses in teaching children with neurological limitations.

2. Facilities: classroom, toileting, furniture, materials, bus services, play, etc.

3. Admission and discharge: screening, criteria, reports on new entrants, trial period, recommendations for transfer and discharge, integration of pupils with other classes.

4. Supervision: kind, problems, workshop courses, etc.

5. Records kept.

6. Program
7. Parents - reports, conferences
8. Progress of the children
9. Special services
10. Recommendations

1. Experience and training

A great deal of variation was apparent among the teachers in length of previous experience, kind of experience, and courses dealing with the brain injured. Length of previous teaching experience varied from none to over 30 years. Types of experience included CRMD, Health Conservation, and regular elementary school experience. One teacher had previously been an athletics coach in a private school. Several had never taught at all. Among the experienced teachers were at least two who were, in the opinion of this observer, not suited to teaching the brain injured. On the other hand, one teacher without experience was excellent, in the opinion of the observer and of the school principal. This teacher, however, had had a good deal of training in special education and also student teaching. Yet, on the whole, both for these teachers and for others who had left the program, it was obvious that most teachers with less than three years of experience floundered for a considerable time, and provided little but custodial experience at least for some time. In fact, retrogression of some children was noted by the observer in certain classes. At least one child showed a tremendous spurt in social adjustment within two weeks after transfer from a teacher with no experience to a teacher with a good deal of experience.

The types of license held by the teachers appeared to make less difference in teacher performance than the amount of experience. They included kindergarten, common branches, Health Conservation, and CRMD, as well as substitute licenses. The two kindergarten licensees had had no teaching experience at all. Another teacher had recently received a regular license under a "Mitchell" examination after 17 years as a substitute.

Nearly all the teachers had taken one or more courses dealing with neurologically handicapped children before or as soon as they began teaching these special classes. The number of courses available in New York was small: two or three at Columbia; one at Hunter; an inservice course by the Bureau for the Education of the Physically Handicapped; and latterly, one at New York University. One teacher had spent part of the summer vacation in a special workshop on the brain injured at Syracuse University before her first semester of teaching these special classes. The universities and colleges in New York have pioneered such courses; they are on the increase here and elsewhere.

The teachers appraised the courses as "fairly" to "very" helpful; one particular course was invariably cited as "practical" and another as "too theoretical and not related to classrooms". There was often a feeling that the courses were "helpful as a beginning" but "the actuality was very different". One teacher had several times assisted in giving the course at Columbia University.

Workshops held from time to time by the Bureau for the Education of the Physically Handicapped especially for the teachers of these special classes were rated especially favorably by all the teachers, a number of whom said they would like to have them on a regular basis. These workshops usually included addresses by outside speakers or reports and discussions by the teachers themselves. At least one teacher felt that the workshops were more helpful than the university courses that she had taken.

While, not unexpectedly, a few teachers felt that their varying amounts of experience sometimes resulted in unmet (or over-met) needs in the workshops, it was obvious that the teachers welcomed the chance to get together and exchange successful approaches and problems, as well as to develop their competence and understanding with the aid of the supervisors and invited speakers.

2. Facilities

Each class had a full-sized classroom; the teachers expressed appreciation of plenty of space. Some teachers who had trapezoid-shaped tables praised their flexibility of use. Others deplored the absence of a shelf or book box in these tables. The use of screens to separate the children while they were working independently varied. In some cases, screens were used not at all or only rarely; in others, they were an important and apparently indispensable device for decreasing distractibility. In one room for which parents had made the separating screens the teacher said her children liked them and called them "My office to do my job".

Classrooms in newer schools had sinks. Where sinks were lacking they were, understandably, sorely missed by the teachers, who were faced with the need for keeping track of volatile children who might have to use the sinks frequently during the day at mealtimes or in art and science periods. The inaccessibility of toilets - sometimes two flights away - was also mentioned by a number of teachers for much the same reason.

Teachers seemed generally satisfied with their classroom equipment or hopeful of a not-too-distant desired change. Almost all, however, mentioned a decided time lag in the delivery of materials ordered - a condition frequently encountered in large public school systems. The lag particularly affected newly established classes. The new teachers often borrowed from others in the school or bought their own, and supervisors brought some that they had borrowed from other schools. Even when materials were ordered early the previous spring for a class to open in the fall, they might fail to arrive. The teachers expressed appreciation of funds (about $75 each) for purchasing materials not on the regular elementary school lists. Some wished the funds were more flexible - available as needed as a "petty cash fund" for "emergencies such as a battery for a science fair or a particular book needed at a particular stage".

The few criticisms of the bus transportation provided to the children were very like those generally made by school personnel. As might be expected with hyperactive children, bus drivers reported difficulties. It was suggested that drivers be briefed on how to deal with the children. One teacher felt that seat belts would help with the problem - especially for children who tend to wander about the bus. Others suggested that an aide should ride on each bus.

In some schools, children proceeded from the bus to the classroom on their own; in most, the teachers met the busses, collected their pupils, and conducted them to the classroom.

Facilities for active play, as well as teacher attitudes towards them, varied greatly. In a number of cases, indoor and outdoor playgrounds were available. Some teachers, however, said that such facilities were either very remote or usually unavailable for their exclusive use.

The wide variation in teacher opinion about desirable physical activities can be exemplified. A teacher of one of the oldest groups said her pupils needed freer activities than structured games. She wanted slides, "monkey cages," and the like for "releasing energy." Another teacher of a group of similar age said she was in favor of a very structured program, didn't favor outdoor play, and had games like ring toss in the classroom. A third teacher of a similar group had about 15 minutes of outdoor play each day. She ascribed the briefness of the period to the need for a generally structured program and the shortness of the school day, saying academic pressures deprived the children of the play time she would have liked them to have. Still another teacher gave her children rather long, unstructured, outdoor "free play" periods in which she herself maintained little involvement.

3. Admission and Discharge

Comments on the admission of pupils to the classes were numerous; it was apparent that teachers felt strongly on this topic.

It was not unexpected that the most consistently approving attitudes towards the current procedures for admission were shown by the teachers in Manhattan. This was the borough that had had an active screening team for about two years. Most of the other teachers indicated that they were not sufficiently consulted as to the admission of a child, into their class, and sometimes indicated that one or more pupils were not suitable cases because of low I.Q. or other psychological limitations. When it was then mentioned that a one-month trial period for each new entrant was designed to utilize the teacher's judgment, most teachers said that the period should be extended to two or more months so that more accurate decisions could be made as to whether the highly disturbed and hyperactive child should be retained. One teacher felt, in the case of a very withdrawn child, that the excitable, hyperactive behavior of the other children might be exerting a negative influence on him, and causing him to become even more withdrawn.

A number of the teachers also expressed the wish that psychological and other evaluative records about a child would reach them by the time a child was admitted or even before. In many cases, reports did not arrive from hospital centers until months after the child had entered, and then sometimes only after determined efforts by the Bureau supervisors. Some hospitals were more prompt than others. The teachers usually coupled their remarks with a wish for a central screening unit like Manhattan's. It was pointed out by a number of them that they sometimes floundered unnecessarily for weeks in trying to plan for the education of a new entrant because evaluations were delayed, and the child's progress was also thus delayed.

A number of teachers expressed a wish for a more specific evaluation of the educational potential of each entrant, indicating the child's specific weaknesses and strengths rather than only general information like an I.Q. or "poor visual discrimination." One teacher cited educational evaluations of two children by Ilse Haeusserman at Brooklyn Jewish Hospital as having provided a fine body of specific clues to planning for teaching. Another said reports accompanying a child were sometimes full, but might be several years old and described an earlier level of the child's development.

The Manhattan teachers said that establishment of a screening team for their borough had greatly improved the selection of new entrants. Several teachers in other boroughs appeared less satisfied, and indicated the need for screening teams. They felt that some children were entering classes who were really mentally retarded, on the supposition that they were "potentially normal" in I.Q. They did not, however, feel that all diagnoses of "potentially normal" were wrong. They said, further, that even when they recommended and received approval for a child's transfer to a CRMD class, there was sometimes a long delay outside their own bureau before retesting and transfer were effected.

The teachers seemed to have had varying experiences in obtaining the cooperation of hospitals. Jacoby Hospital was cited several times as being very cooperative and thorough. One teacher said that the Jacoby staff had invited her to a group conference with a social worker, a pediatrician, and a psychiatrist about two different children. They had made suggestions about handling these children and had invited her to call them if she had difficulty. She said that of all the referring hospitals in her experience Jacoby had given her the fullest records.

For the most part, the teachers deplored the lack of reevaluation by the hospitals of the pupils after they had been in the classes for a year or two. Such reevaluation was obtained several times through special efforts by Bureau supervisors and the insistence of certain teachers, but not in the majority of cases. It was apparent that such data were desired not only for use in transfers and discharges, but also for further planning and for the teachers' own reassurance as to whether their individual programs and instructional approaches were succeeding.

Discussion of problems related to transfer and discharge led a number of teachers to express concern about the length of time children ought to remain in the program. While an occasional comment revealed that there might be some lack of agreement between the school principal and the Bureau supervisor about retaining a child in the class, such occasions were rare, and the relationship between school and visiting Bureau personnel seemed to be particularly harmonious.

4. Supervision of the Classes

At the time of the interviews discussed here, the teachers had had widely varying amounts of experience both in total teaching time and in teaching the special classes. Expressions of satisfaction with the amount of supervisory assistance available varied. Most teachers said that the visiting supervisor came about once a month and spent about twenty minutes or a half hour with them. Newer teachers got more help. The kind of additional help from the principal of the school varied with the school.

In general, the more experienced teachers seemed to feel that sufficient supervisory time in the form of training was presently given them, but that they would have appreciated more when they began teaching the special classes. Some did feel that more time for consultation with supervisors on specific problems or children was in order. Newer teachers expressed the need for more guidance both for the program in general and also for special problems that arose.

The amount of help given by the individual principals seemed to vary. Two principals were described as being outstandingly interested and supportive; this circumstance is not surprising, since one was a clinical psychologist as well, and the other had had long experience in supervising classes for cerebral palsied children.

In a number of indirect ways, the teachers, as teachers of special classes often do, expressed a need for more contact with other teachers of similar classes. Some feeling of isolation had been expressed by teachers of the classes first established; for the most part these had been the only classes of the sort in the school. Expressions of isolation became less noticeable as new classes were established and as a pattern of two (or more) classes to a center became the rule. Teachers then volunteered many references to cooperative planning and even programming, and new teachers sometimes spoke gratefully of the help they had received from a more experienced teacher of the special class. Nevertheless, there were numerous statements of the wish for more frequent meetings of all these teachers. This often took the form of praising the workshop conferences that the Bureau's Director has already convened, and wishing that they were held on a monthly basis. A certain amount of insecurity among even the best teachers is understandable in view of the complex individual problems presented by the pupils, the recency of recognition of the problem, the comparative lack of literature on educational methods, lack of precise methods of differential diagnosis, and other areas of disagreement and uncertainty among specialists and authorities.

5. Written Plans and Recording

All the teachers maintained written plan books, and submitted them regularly (weekly or bi-weekly) to their school principals. The plans varied in arrangement and organization. Most were fairly full and specific with plans for both group and individual. A few were extremely skimpy.

There was wide variation with regard to keeping records about the children. A few teachers maintained very active and even elaborate anecdotal records for all or most children and considered them very valuable; they tended to reread them at intervals to gauge progress, to look for clues to behavior patterns, to search for "what helped another time," or to use for reference in parent or supervisor conferences. Other teachers maintained less active anecdotal records; some were uncertain why they kept one at all. A few teachers appeared to keep none; one felt that "experienced teachers don't need them."

The teachers differed widely in the extent to which they knew about their children's previous school history. Some had made careful written summaries of the medical reports, and were able to recall at need many of the findings of various examinations; others were either somewhat or very hazy. In general, the teachers who knew a good deal about the children's previous history were also those who kept detailed or fairly detailed anecdotal records. A mimeographed form requesting data on the children sent to the teachers by the researcher in April 1960 showed extreme variation in the amount of pertinent data on the pupils that the teachers were able to supply.

6. The Program Outside the Classroom

A very general reference to the teacher's program elicited certain basic variations. These were related to the specific children in the class as well as to the teacher's own orientation. A number of classes attended assembly exercises with the rest of the school; others did not or only part of the class did. One teacher had attended "until they became persona non grata." Another teacher sorrowfully said she had stopped taking her class to the grade assembly; the assembly director had disapproved of the behavior of two of her young children one day and had publicly said, before the assembled classes, "We'll wait till the brain-injured children are removed." On the other hand, one teacher reported that a child was a member of the Color Guard in the grade assembly. Her class had also presented a program in the auditorium to the regular classes.

Some teachers regarded taking children on trips as an essential and valuable aid; a few felt they were time-consuming and interfered with structured education - were too stimulating. Some classes went to many school shows - movies, puppets, magicians; others attended few. One teacher said the school principal did not permit trips, but did permit "walks"; she did not care for the latter (had gone once) but would have liked to take the class on trips with the help of the parents. In one case, the class went to the gymnasium to play at the same time as regular classes.

7. The Parents

While the teachers were not asked to describe (or characterize) the parents of their pupils, a picture does emerge. In general they are cooperative (with notable exceptions), but more anxious than parents of regular classes, and sometimes very demanding of the teacher's time. According to many of the teachers, the services of a social worker and/or psychologist are needed for the parents themselves, especially to help them resolve their own attitudes toward their exceptional child; e.g., hostility, overprotectiveness, "overpermissiveness." In some cases, teachers said a child was making progress in the class, but was regularly "upset by a parent at home." Some parents were considered as needing psychotherapy; they were said to be retarding the emotional adjustment of their children.

The negative characteristic of parents most often cited by the teachers was parental pressure on the children for academic success; teachers of the younger children mentioned this pressure as often as those of the older. Parents demanded perfect work, more rapid progress, and more "academics" and homework. A few parents were said to be overambitious in planning for a child's future (e.g. college) in view of his actual ability.

The amount of contact between teacher and parent varied widely. Some teachers had regular conferences with parents two or three times a year - the number usually suggested for the city's elementary school teachers. Others had regularly scheduled conferences every month or every two months. All the teachers said they called parents for additional conferences when "the need" arose. Some teachers regularly held group parent-conferences in which common problems were discussed. Two others regarded the first six weeks of a child's enrollment in their class as a training period for the parent as well; during that time they interpreted the class program and made specific suggestions for routines at home to further the child's adjustment and self-care - dressing himself, eating habits, chores to be responsible for, books to read aloud, and the like. Some other teachers also mentioned giving specific guidance to parents in dealing with the child at home.

Additional contact with parents was maintained through notes and telephoning. Each teacher soon learned not to give her home phone number to parents, however, to avoid overfrequent calls at home.

Nearly all the teachers sent home a report card from one to three times a year. Some sent a card only at the end of the year. For the most part, they used the regular school report cards, though not always the one prescribed for their pupil's age level. One teacher said she issued no card, but thought report cards should be used. A number of teachers made their cards "very descriptive."

Problems on which teachers gave guidance to parents were very varied: "no friends"; "what to do on Saturday"; "behavior while eating"; "father's attitude"; "the new baby sitter."

VI. THE INTERVIEWS WITH THE PRINCIPALS

On visits to schools to observe classes or test children, the researcher availed herself of the opportunity to speak with the Principal (or Assistant Principal, if in charge of the Special Classes) whenever possible. These conversations were informal and fairly brief most of the time, and were often initiated - and apparently welcomed - by the supervisors, who seemed to feel it was important to present certain problems in spite of busy schedules.

As a result of these numerous but fairly brief conversations, a list of questions could be devised on which partly structured interviews were held toward the close of the study. Seven principals who had one or more classes enrolling children in the Longitudinal Study were interviewed at some length on the following questions:

1. What problems have arisen in your school as a result of having these special classes?
2. Who should supervise instruction of these special classes?
3. What qualities and qualifications should the teachers have and how should they be chosen?
4. What kind of program should these classes have?
5. What should be the class size?
6. Should the classes for brain injured children be continued?
7. Can they be integrated with the school?

Most of the responses to these questions are grouped, in this report, under three headings: (1) problems; (2) supervision; (3) teacher selection.

1. What problems have arisen in your school as a result of having these special classes?

A good many different problems were mentioned by the various principals. Most of these were important; yet it was obvious that the supervisors considered that they were not unsolvable and were trying to solve them.

A large proportion said with concern, but without resentment, that the classes were time-consuming for them. For instance, there was no provision for the child who suddenly had an "emotional storm." "Occasionally" or "frequently" the principal would have to interrupt his own program and take care of a temporarily disturbed child in his own office for part of the day, since there was no other place for him. In addition, two principals said that some parents took up a disproportionate amount of time with complaints, and several had taken to phoning the principal at home. Frequently, these were the same parents mentioned by the teacher in this connection.

The supervisors differed with regard to having more than two of the Special Classes in a school. One who had four said that they were too burdensome - two would have been sufficient; the other who had four felt that so many were advisable because the teachers were better able to cooperate among themselves. In the latter school, one teacher had been selected by the principal as a leader and conducted regular group meetings with the other three teachers.

The unpredictable and difficult behavior of the pupils was cited as a major problem. A number of comments were made about the need for an attendant to help with such matters as escorting children to the toilet. One child alone in the hall, for instance, had stormed up and down and had yelled for some time, destroyed bulletin boards, and overturned chairs. It was felt that an attendant should also help keep order among these hyperactive children in the buses. It was pointed out in addition that, since the classes tended to be in non-Special Service Schools (because classrooms could be procured), the benefits of having several extra unassigned teaching positions in a school were not available. Similarly, more clerical help was needed because of these classes: copying of long medical reports, letters to doctors or psychologists, letters to parents. This extra assistance was not available, and the burden rested on the existing clerical staff.

Nearly all the principals mentioned the problem of providing a substitute when the regular teacher was absent. It was difficult to find a substitute who could - or would - control the children; on the other hand, parents objected to discontinuing the class on days when the regular teacher was away and a competent substitute was not available.

The need for the services of more specialists was frequently cited - psychologists, speech therapists for individual training, and, especially, social workers. The parents were held to be sorely in need of help in their relationships with their children, in establishing home routines, in continuing the benefits of the special class in the home. The emotionally unstable parent retarded the emotional development of the child.

Certain serious problems were presented with respect to admission and discharge of pupils. In a number of cases it was stated that procedures for identification of candidates for the classes needed to be sharpened - that children who seemed to be primarily emotionally disturbed rather than neurologically handicapped had been admitted. It was generally felt that, in such a case, the child ought to be discharged; but one principal felt that "brain-injured behavior" warranted continuation in the class, no matter what the primary cause. In general, principals felt that trial periods of at least one to three months ought to be maintained, and one said that, even after a longer period, "Sometimes we have to admit a failure. The child must go back to home instruction, though the parent is very hard to convince."

Concern was frequently expressed over the future of those children who could not, after a reasonable period, be placed in one of the mainstreams of public education. How long could the children be retained in such an expensive situation? What would happen as they grew older? Would they be retained until they were 21? Or should they be discharged before that? Would special classes for older brain-injured children be set up? Could their classes be maintained in an elementary school setup?

A number of principals also said that selection of teachers was a problem. As might be expected, the problem was mentioned spontaneously by supervisors of schools with less able teachers or where teacher turnover had occurred. Decided objections to the use of inexperienced substitutes as teachers of the classes were voiced. One principal said indignantly that classes should not be opened unless competent teachers were ready to take them; it should be noted, however, that the two classes in this case were not new, but were newly transferred to the school. Replacements had hastily been found for the two teachers who had retired or gone on maternity leave. The two substitutes in this case had never taught any class at all before this assignment.

It was apparent, on the other hand, that the problem of finding - and selecting - good teachars was greatest in those areas where the classes had been expanded most rapidly. Numerous comments of the principals about teacher selection and characteristics are included in a separate section below.

The problem of intercommunication was also felt to be important. Several principals mentioned the difficulty of getting medical and psychological reports with even moderate speed. In this connection, the unmet need for medical and psychological reevaulation was brought up. As an example of inadequate "machinery" for communication, one principal said, "We do not know enough about these children. For example, if a child is regularly under sedation, the school should be informed."

Another problem mentioned by several principals was the need for educating the other school personnel about the children and the classes. In this category one principal included the school doctor and nurse: "They don't know the set-up. Our school nurse said chidingly to one child, 'Oh, I think it's time for you to go back to a regular class,' and the child was very disturbed about this for quite a long while." Apparently, the nurse regarded the child much like those in the classes for the physically handicapped, for whom speedy transfer to the regular class is recommended whenever the child seems physically able.

It was felt that six was about the right number for the classes, but that teachers of other classes in the schools needed to know why these Special Classes were so small.

2. Who should supervise instruction of these special classes?

Not unexpectedly, the extent to which principals supervised instruction varied widely. The comments of the teachers also bore out the impression of differences in participation by the supervisors.

Principals with a special allied interest (e.g. one who was a psychologist; one who had supervised classes for the cerebral palsied) seemed to offer most support and seemed to visit the classes most often. Two other principals frankly said they knew little about brain-injured children. A few said they were greatly interested but had little additional time to devote. In some cases the supervision of instruction was left largely to the borough supervisor of the Bureau for the Education of Physically Handicapped Children, though some time was given to the administrative phases of the program. However, appreciation was expressed for the principals' conferences held by the Bureau for the Education of the Physically Handicapped.

3. What kind of program should these children have?

The question about program elicited far less response than the others, particularly from those supervisors new to the classes. In general it was said that the program should be structured and individualized with "limits" set for the children, but "flexible" and "warm" in nature. Some principals had made modifications. In one school a volunteer ceramics teacher had special sessions with some of the children. She said they "showed a positive response." She felt that such instruction should be continued, though only by a person trained in the handling of clay.

Yet from time to time spontaneous remarks from a number of principals revealed that they had thought carefully about the classes, but were unsure as to what the program should be. "We don't know enough about this kind of child"; "We don't know how to teach these children"; "Teachers are finding their way in the curriculum." While in a few cases the principals seemed to be speaking of their own unfamiliarity with this new type of special classes, it was evident that the others felt that much needed to be learned about the child with brain injury and methods of teaching him, and that it was important to choose teachers who were "experimental."

All the principals reported some degree of integration of children in the special classes with the rest of the school, either through assembly programs or through regular-class programming for one or more periods for individuals who had shown progress. It is probable that specific opportunities were suggested by the teachers and administered by the principals.

4. What qualities and qualifications should the teachers have? And how should they be chosen?

Of all the comments by the principals the area of teacher qualifications and qualities elicited the freest response. It was obvious that theyregarded teacher selection and training as preeminently important; in the words of one, "The teacher is the key person."

It was also evident that there was a great deal of agreement on what qualities were desirable. Those principals who had had less interest in or experience with the Special Classes tended to use generalized terms: "calm", "understands children", "wants to work in the program", "professional", "sympathetic", "well-organized", "friendly", "warm", "sense of humor", "dignified", "creative", "fill the child's need", "regularly licensed".

Principals who had taken a more active part were more specific, but did not really disagree with the foregoing terms. In addition to the above, they said that the teacher must "plan and write down", "ask why a particular procedure does not work", "know where to go for information", "be more clinical", "want to experiment", "understand the emotionally disturbed", "have a laboratory point of view", "be objective as well as warm", "command a wide variety of teaching techniques", "know the laws of learning and habit formation".

Certain comments as to teacher qualities point up the principals' awareness of the exacting nature of the special teacher's task: "have a sense of humor", "be the doing kind of person", "not regard any job as too menial", "be able to take physical abuse", "not become too personally involved", "give more of self than the average teachers", "dignified", "able to explain the program to others", "a hard worker".

Nearly all the principals voluntarily said the special teachers should have a regular (not a substitute) license and should have had plenty of previous teaching experience before teaching these special classes. Opinions differed as to what this experience should be, but three to five years of elementary school experience was usually mentioned as a desirable minimum.

One highly experienced principal said (and reiterated) that, not only for these, but for any kind of classes for the handicapped, the teacher should first have had experience in teaching regular classes of non-handicapped children. This principal felt that previous experience with large regular classes was imperative. The teacher could thus develop a wide variety of techniques, learn to recognize and deal with a variety of remedial needs and situations, and have a clearer idea of the range of achievement expectancies. In a few cases, Special Class teachers were considered by principals to be either overdemanding or too undemanding in academic areas.

Other principals were not particularly insistent on one type of experience over another. Some mentioned health conservation classes as good preparation, but not as the sole kind. One principal felt that kindergarten experience was probably ineffective since the kindergarten program stresses an informal, experiential, whole approach based on Gestalt psychology, rather than a structured approach. A principal who was also a psychologist saw preliminary intensive training as desirable. He felt that the teacher of brain injured children should be "a trained person who has worked with the brain injured in a clinical setting in a one-to-one relationship and also knows many educational approaches. This person should have had practical courses and a supervised internship in a clinical setting under a neurologist or a psychiatrist". He commented that such training was optional and would be probably too expensive to carry out. Yet he wished to stress that the special teacher should have both previous teaching experience and special courses before undertaking the job.

While some principals stressed special courses on the brain-injured as a prerequisite to teaching the classes, others were willing to accept a highly competent experienced teacher who could take the courses concurrently with teaching the class. Obviously both previous teaching experience and special courses were regarded as necessary. One principal added with a good deal of feeling that if a competent experienced teacher were not already available, a new class should not be added to the program. All principals emphasized that teachers who could not go far beyond mere custodial care did not belong in the program.

5. Should the classes be continued?

The general concensus of the principals was that, while the program was more expensive than regular classes, all special education is expensive. The program should be continued in view of the fact that most of these children could not be served in a regular classroom setting.

VII. RECOMMENDATIONS ARISING FROM THE STUDY

Through observation of the classes, interviews with principals and teachers, and examination of pupil records, a large amount of data was gathered about the classes and program for brain injured children. This program is for the child with normal or potential normal intelligence who has social-emotional difficulties and perceptual problems. It thus excludes the child with serious sensory defects like blindness or deafness, or cerebral palsy, or mental retardation.

The body of data gathered was too large to report in this research study or to summarize here. It can be said, however, that several years of observations and interviews leave an over-all impression of determined effort by the Bureau for the Education of the Physically Handicapped to improve various aspects of its program for the brain injured. In interviews with the Bureau's director and supervisors, it was evident that continuing efforts were made to identify and deal with problems. It is therefore likely that most of the recommendations following will be in consonance with the Bureau's aims for its program.

A. MEDICAL, PSYCHOLOGICAL, AND EDUCATIONAL EVALUATION

In the opinion of the teachers in Manhattan, the establishment of a screening team resulted in a more accurate selection of children for the special classes. In a number of cases in the other boroughs, the teachers considered that certain children were primarily emotionally disturbed or mentally retarded and were not benefiting from being in the special class for brain injured children. The teachers felt that, while a screening team was expensive, placing unsuitable candidates in the class or continuing such children after placement was even more so.

Teachers (and some principals) also expressed the need for neurological and psychological reevaluation of their pupils - annually if possible. They also stated that the most recent psychological data in a pupil's records were sometimes several years old at the time he entered the class, and that reexamination before entry to the classes would reflect the child's present status more accurately, particularly as concerned the I.Q.

The study also showed that the average I.Q. of the group studied was only slightly above 75. A number of children, particularly in the early days of the program for the brain injured, were admitted with a recorded I.Q. in the CRMD range; even after several years in the Special Classes, some of them were placed in CRMD classes after transfer. It is possible that more intensive screening or later reevaluation might have designated the classes for the mentally retarded as more suitable placement for a few children.

Recommendations

1. The services of a screening team should be made available to the Special Classes in all the boroughs to improve selection of new pupils. Recent psychometric data could thus also be made available to the teacher.

2. Medical-psychological reevaluation of the children in the Special Classes should be a continuing feature of the program. If reevaluations cannot be obtained each year for each child, they should be made available at least on request of the teacher for certain children. Additional funds should be made available to the Bureau so that such reevaluations could be paid for, since clinic services have very long waiting lists.

B. SELECTION AND TRAINING OF TEACHERS

Again and again the principals made it clear that the qualities and experience of the teacher were of paramount importance in the education of the brain injured. They stressed the fact that in these Special Classes, even more than in regular classes, the ability and dedication of the teacher were critical in the progress of the children.

The principals also maintained that only experienced teachers with regular licenses should be assigned to classes for the brain injured. Supervisory personnel of the Bureau for the Education of the Physically Handicapped pointed to the difficulty of obtaining teachers for the Special Classes.

Although some university courses on the education of minimally brain damaged children are available, they are few in number and received variable ratings from the teachers. The Bureau's own inservice workshops were more highly rated. Similarly, the help of the Bureau's borough supervisors was well-regarded, but the teachers pointed out that the demands of the large number of other types of classes visited meant that very little supervisory time was available for their own classes.

The principals also had limited time available for teacher training, and for many of them the education of the brain injured was a new field.

The teachers praised their Bureau's workshop meetings, and expressed a desire for their establishment on a regular basis.

Recommendations

1. Regularly licensed (not substitute) teachers, with at least three (and preferably five) years of previous elementary school experience of some type, should be assigned to the Special Classes.

2. These teachers should already have had courses in teaching the brain injured or should at least be required to begin them immediately on assignment to the program.

3. In-service training and direct supervision of teachers new to the program should be intensive for the first year.

4. Continuing and regular supervisory visits to all the Special Class teachers for consultation on various problems or on planning for certain children should be increased.

5. Efforts to continue the Bureau's much appreciated teacher-workshops on a regular basis should be increased.

6. In order to identify experienced teachers who would be interested in teaching the Special Classes, efforts should be made to apprise the general body of licensed elementary school teachers of the nature of the program and opportunities for teaching in it.

C. SUPERVISION

The duties of the borough supervisors of the Bureau for the Education of Physically Handicapped Children are too heavy to permit them much time for these Special Classes. The services of the Bureau supervisors of these special classes are needed not only for teacher training, administration, and consultation with principals, but also for intercommunication with other bureaus, with hospitals and other treatment agencies, with supervisors, with guidance counsellors, and with teachers of schools to which discharged children are transferred.

Furthermore, at the present time the education of the minimally brain damaged is a field that is relatively new, is complex, and is the subject of a great deal of controversy and research. It is thus extremely demanding in terms of on-going self-education on the part of supervisors. A number of school principals indicated that they knew little about the subject and had little time to spend on specialized teacher training.

Teachers sometimes said that children recommended for discharge to classes in other divisions had to be retained because of red tape outside their own bureau.

Teachers, supervisors, and other personnel in receiving schools were liable either to have no knowledge of a child's history of brain damage, or to misunderstand what such a diagnosis meant.

Recommendation

At least two full-time supervisors (or coordinators) should be assigned solely to the large number of classes now in the program. The duties of such supervisors should include teacher training; involvement in admission and discharge; liaison with treatment agencies, other bureaus, and receiving schools; leadership in disseminating understanding of the nature of brain injury among non-Special Class teachers; and numerous other needed functions.

D. PROVISION OF AUXILLIARY SERVICES

Both teachers and principals mentioned the need for psychological and social-work services. For one thing, both recent psychometric evaluations and regular reevaluations were desired. In addition, a number of children and some parents were in need of therapy or counseling. Certain parents were held to be in serious need of help in their relationships with and home training of their children.

Teachers and principals also spoke of problems that indicated the need for additional personnel within the classroom. They felt that an aide was necessary to provide continuity by helping a substitute when the teacher was absent; in maintaining order on the busses; in taking care of a greatly disturbed pupil who must be temporarily removed from a classroom; in taking pupils to the toilet, and in other problem situations.

Recommendations

1. Psychologists and social workers should be assigned specifically to the program for the brain injured.

2. A nonprofessional aide should be assigned to each group of classes for the brain injured.

E. CURRICULUM DEVELOPMENT

The recognition of minimal brain damage as an important deterrent to normal functioning is of relatively recent date. The literature on the problem shows disagreement as to the best approaches to the personal and educational development in such brain injured children.

A number of the teachers observed were, with the cooperation of their supervisors, locating, developing, and devising materials and methods. They understood, however, the complexity of the problems, and felt that a great deal more needed to be learned about educating children with minimal brain damage.

Both the disagreement and the complexity are related to the wide variety of limitations manifested by the children, such as visual or auditory perception, symptoms of aphasia of one kind or another, and evidences of social-emotional handicaps.

Recommendations

1. Since the Bureau for the Education of Physically Handicapped Children has had more direct experience than most educational agencies in the field of brain damage, it should be in the forefront of research.

2. The cooperation of one or more hospitals with strong neurological departments should be sought in the establishment of day classes for children with minimal brain damage within the hospital. Under the joint efforts of Bureau and the hospital, and with the maintenance of careful records, research should be directed to discovering specific approaches best suited to specific limitations, and to other aspects of teaching the brain injured.

F. PARENT EDUCATION

As described by the teachers and principals, a number of the parents were overanxious, pressured their children for academic success, and needed help in improving their relationships with their children. They were eager to help the children at home in learning activities such as dressing themselves or doing chores, or with their homework, but often needed guidance in achieving these ends. The parents in general were especially anxious for specific information about the child's progress. It was evident that, more than the parent of the average child, the handicapped child's parent, needs guidance and information.

There was a good deal of difference in the extent to which the teachers assumed responsibility for reporting and interpreting children's limitations and progress. This was also true in respect to guiding parents in carrying the classroom program into the home in such areas as self-care, responsibility for minor chores, health and hygiene principles, relationships to other people, and simple study habits.

There was also wide variation in the number of regular teacher-parent conferences initiated by the teachers. On the average, these special teachers had considerably more contacts with parents than do teachers of regular classes. A number of them initiated individual and group conferences with parents at which common problems were discussed and positive parent attitudes could be developed. Some teachers, however, depended on conferences at the times report cards were issued, and on telephone calls.

The types of report cards used by the teachers varied to some extent. Nearly all used some kind of written report; in general, some form of the regular elementary school report card was used.

Recommendations

1. It is probable that, at least for a child's first year in the special classes, the teacher should be ready to have individual or group conferences with parents about once a month in order to provide regular, continuing education and guidance to parents in dealing with their brain injured child.

2. Development of a special report card that would emphasize (and de-emphasize) certain aspects of the child's progress might be an aid to the parent's understanding of the school's program.

G. INTERCOMMUNICATION

The wide geographical distribution and special needs of these classes pose special problems of communication. The backgrounds and educational needs of children discharged from the program were often found to be unknown or even vaguely threatening to receiving and later teachers, particularly of regular classes. Health conservation teachers were more likely - though not always - to be better informed.

Teachers said they frequently found it difficult to obtain the medical-psychological histories of new admissions from referring hospitals. They also needed other important information from treatment agencies such as whether and what kind of medication was being given (tranquillizers, energizers) and whether psychiatric or other treatment was going on.

Recommendation

These and numerous other problems of intercommunication among Bureau, schools, treatment Agencies, the Bureau of Child Guidance, and other interested groups should be the concern of full-time Supervisors or Coordinators of classes for the brain injured recommended under the heading "C. SUPERVISION".

H. WIDENING THE PROGRAM

It is frequently pointed out by writers and lecturers on brain damaged children that they are in regular as well as in special classes. A number of these children may not draw attention to themselves as being brain damaged because they are not particularly hyperactive or over-aggressive. They may, however, fail rather spectacularly to make progress in writing, or spelling, or mathematics, or reading, or any combination of these. Such children are often regarded as generally dull rather than as a specifically handicapped, and at best may get brief periods of instruction in a group of "retarded readers".

Even in the Special Classes observed, there were some children who seemed to belong to the category just described. It is possible that these children could have functioned in a regular class if they had had consistent individual training by a teacher who was a specialist in teaching children with perceptual defects.

It is frequently pointed out that a regular rather than a special class is more desirable for children who are emotionally and physically able to function in a large-class setting. The Bureau for the Education of the Physically Handicapped follows this policy whenever possible in its classes for the physically handicapped.

Since the special classes for the brain injured were begun, there has usually been a good-sized list of children who were waiting for admission.

Recommendation

1. It is therefore recommended that the Bureau for the Education of the Physically Handicapped pioneer a program of teacher education for teachers of regular classes. These teachers need information about the characteristics and identification of children who may have brain damage that is affecting their school achievement.

2. Children with minimal brain damage who are emotionally and socially able to function in a large-class setting should not necessarily be assigned to the Special Classes.

3. These children, whenever possible, should be serviced by itinerant teachers, trained to teach the brain injured, who visit the schools to give specific individual training on a regular continuing basis.

VIII. A POSTSCRIPT

Since the last data were collected and the final draft of this document completed, the Bureau for the Education of the Physically Handicapped has continued to move in the direction of modifications and innovations in their program for brain injured children. A conference with the Director and an Assistant Director of the Bureau revealed some interesting new trends as of September 1964.

1. Expansion of the Program

As of September 1964, there were 54 classes in the program and a list of about 100 children who were waiting for screening and placement. In addition, there were many queries and referrals from guidance counselors, principals, and treatment agencies. Although the number of classes has increased, the Bureau has actually tried to slow down the expansion of the program in an attempt to "consolidate the gains" that have been made.

This has not been easy. The demand exerts pressure for the opening of new classes. The state law says that, when requested, suitable education facilities must be furnished until age 21 to physically handicapped, emotionally disturbed, or mentally retarded children who can benefit from instruction.

2. The"Third Teacher"

Because of certain difficulties (such as obtaining a substitute competent to cope with difficult situations) the Bureau is experimenting with the use of team teachers.

In three different schools, a third regular teacher has been added to a pair of classes, and the register in each class has been raised from six to eight. This "team teacher" will provide both group and individual instruction as needed by either class as well as participate in any other procedures and routines from interviewing parents to keeping records. So far, the indications are that the success of the venture depends in part on the interpersonal relationships of each team. Aside from that aspect, the teachers report to the Bureau that while there are many advantages in the "team" setup, a register of six is "the point of no return"; they feel, in general, that a group larger than six is very difficult.

3. Itinerant Teachers

As of September 1, 1964, four teachers were assigned as Teacher-Coordinators to the program for brain injured children. In general, these itinerant teachers service two classifications of brain injured children: (1) the child who has moved from the Special Class to a regular class or to other special placement such as Health Conservation classes, Junior Guidance classes (for the emotionally disturbed), CRMD (for the mentally retarded) or Home Instruction; (2) the child with some degree of brain injury who has not been accepted for placement in the classes for the brain injured, but who, while able to maintain himself in a larger-group setting, needs special training in some specific learning area. An itinerant teacher is to visit the child's school to give (1) individual teaching and (2) assistance to the classroom teacher by suggesting suitable materials and approaches and providing understanding of the child's learning problems.

4. Screening

The value of intensive screening of new entrants by a screening team as carried on for the borough of Manhattan has been clearly demonstrated. The Bureau therefore is working on plans for the other four boroughs, and hopes to establish a screening team in each.

5. Extension of Teacher Training

The Bureau is gradually extending teacher education on the brain injured beyond those actually teaching such classes. Teachers of Health Conservation or Home Instruction classes are invited when possible to the special workshops.

An annual conference on the brain injured is conducted in cooperation with the New York Association for Brain Injured Children. Teachers of other types of classes are invited to this conference. The Bureau hopes in time to give more extensive and intensive training on the problems of educating the brain injured child.

6. Adaptation of Program

In some cases, children identified as brain injured are not able to tolerate a group situation or even a learning situation, and therefore cannot be placed in the Special Classes. These children are therefore serviced in the Home Instruction program for a time as a preparation for introduction into a Special Class.

7. The Older Child

Whenever possible, children who are considered to be ready for placement in some other type of class are transferred out of the classes for the brain injured. Some children must be retained even after the age of thirteen or more. Since it is undesirable for pupils of that age to attend a sixth-grade elementary school, two classes for the brain injured have been established in junior high schools. Additional junior high school classes are planned.

8. A Manual for Teachers

A manual for teachers of the brain injured has been prepared by the Bureau. This publication has grown out of the needs and suggestions of the teachers who have participated in the Bureau's workshops. It sets forth the philosophy of the Bureau's program, and covers a variety of topics that include approaches to specific learning disabilities.

9. Supervision of the Special Classes

In order to provide needed additional classroom supervision for the expanded program, the Bureau has requested the appointment of more supervisors, but the new positions were cut out of the education budget.

The program as a whole is now directed by an Assistant Director of the Bureau.